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NOTES AND BRIEF ARTICLES

Professor A. J. Pieters describes and illustrates *Achlea Klebsiana* sp. nov. and *Saprolegnia Kauffmaniana* sp. nov. in the December number of the *Botanical Gazette.*

Mr. R. C. Faulwetter, of Columbia University, has been appointed plant pathologist of the Agricultural Experiment Station of South Carolina at Clemson College.

Professor Paul Sorauer, of the University of Berlin, widely known for his work on plant pathology, recently died at the age of seventy-seven years.

Professor H. H. Whetzel, of the department of plant pathology, Cornell University, and Dr. E. W. Olive, of the Brooklyn Botanic Garden, sailed for Porto Rico on February 19 to study fungi and plant diseases.

Mr. Irving E. Melhus, formerly pathologist in the Bureau of Plant Industry at Washington, is now associate professor of plant pathology in the Iowa State College, at Ames, Iowa.

Dr. J. J. Taubenhaus, associate plant pathologist of the Delaware Agricultral Experiment Station, has accepted the position of head plant pathologist and physiologist at the Agricultural Experiment Station, College Station, Texas.

At the meeting of the Society of American Bacteriologists held at the University of Illinois at the end of December, Dr. Thomas J. Burrill, formerly vice-president of the university, was elected president of the society for the coming year.

Dr. W. J. Robbins, instructor in botany in the New York State College of Agriculture, has been appointed botanist in the

Alabama Polytechnic Institute to fill the vacancy made by the resignation of Dr. J. S. Caldwell, who has been called to the Washington Agricultural Experiment Station.

Miss Mary K. Bryan has found that the nasturtium is subject to a bacterial wilt disease, which prevents blossoming, stunts the plants, and finally kills them. The causal organism is *Bacterium solanacearum* Erw. Sm. Miss Bryan's results were published in the *Journal of Agricultural Research* of August 16, 1915.

Associate Professor H. P. Barss has been promoted to be professor of botany and plant pathology at the Oregon Agricultural College in place of Professor H. S. Jackson, who recently resigned to accept the position of plant pathologist at Purdue University.

"A Honeycomb Heart-rot of Oaks Caused by Stereum subpileatum," by W. H. Long, appeared in the *Journal of Agricultural Research* of December 6, 1915. The disease is rather widely distributed in the southern United States and is one of the important heart-rots of our native oaks. The only known method of control is the destruction of all diseased timber containing the rot.

A bulletin on the " Phytophthora Disease of Ginseng," by Joseph Rosenbaum, was published by the Department of Plant Pathology of Cornell University in October, 1915. The fungus is said to resemble most closely *Phytophthora cactorum* (Cohn & Leb.) Schröt. The suggested methods of control include spraying, removal of diseased plants, deep planting, crop rotation, sterilization of the soil, and drainage.

The officers for the Botanical Society of America for the coming year are: *President,* R. A. Harper; *Vice-President,* G. T. Moore; *Treasurer,* Arthur Hollick; *Secretary,* H. H. Bartlett. The society voted to eliminate the class of membership heretofore known as fellows, but failed to create a class of honorary membership as outlined in a proposed amendment to the constitution.

In a recent circular on "Wood Decay in Orchard Trees in California," by W. T. Horne, attention is called to the frequent occurrence of rots affecting orchard trees, in many cases apple and stone-fruit trees being seriously attacked by wood-destroying fungi. The author recommends cutting out, disinfecting, and coating the wounds with asphaltum. The trees should be inspected at the end of the summer and the disinfection renewed if necessary.

Dr. N. Patouillard has an article in the *Philippine Journal of Science* for March, 1915, on fungi sent to him from the Philippines by Professor C. F. Baker. The article contains a long list of determinations and also the following new species: *Septobasidium laxum, Hymenochaete pavonia, Duportella velutina, Duportella Raimundoi, Leucoporus ameides, Leptoporus Bakeri, Leptoporus armatus, Hexagona lachnochaeta, Elmerina foliacea, Daedalea philippinensis, Ganoderma Bakeri, Ganoderma plicatum,* and *Crinipellis fragilis.*

A bulletin on "Insects as Carriers of the Chestnut Blight Fungus," by R. A. Studhalter and A. G. Ruggles, was recently published by the Department of Forestry of Pennsylvania, in which experiments with ants, spiders, beetles, flies, and other kinds of insects are outlined, and it is shown conclusively that insects are largely instrumental in the dissemination of the chestnut canker and many other injurious fungi. The bulletin also contains an interesting historical summary of the experiments thus far made with insects as carriers of fungous spores.

Professor E. A. Burt, mycologist of the Missouri Botanical Garden, visited the Garden February 12–17 to examine the collection of Thelephoraceae in the mycological herbarium. He has been publishing a series of papers on this important and difficult family, which he hopes to complete within the next three years. He will then prepare descriptions of the species for publication in *North American Flora.* Professor Burt's visit was made the occasion of a dinner to over twenty local mycologists and other botanists, given by Professor Harper on the evening of February 16 at the Columbia Faculty Club.

At the seventh annual meeting of the American Phytopathological Society, held at Columbus, Ohio, from December 28 to 31, the following officers were elected: *President,* Dr. Erwin F. Smith, Bureau of Plant Industry, Washington, D. C.; *Vice-president,* Dr. Mel. T. Cook, New Jersey Agricultural Experiment Station, New Brunswick, N. J.; *Secretary-Treasurer,* Dr. C. L. Shear, Bureau of Plant Industry, Washington, D. C.; *Councilor,* Dr. F. D. Kern, Pennsylvania State College, Pa. Dr. W. A. Orton was elected one of the chief editors of *Phytopathology,* and Professor H. T. Güssow, Dr. C. W. Edgerton, Dr. E. C. Stakman, and Dr. V. B. Stewart were elected associate editors.

A bulletin on "Melaxuma of the English Walnut," by H. S. Fawcett, has recently been published by the California Horticultural Commission. This disease causes black cankers and exudation of black sap on the large limbs and trunks of English walnut trees in Santa Barbara County and certain other counties in California. It is infectious, being caused by a species of *Dothiorella* which also attacks a willow in that vicinity, poles of which are often used to drop the lower limbs of the walnut trees. If not too far advanced, it may be controlled by cutting out the cankers and dead limbs and treating the wounds with strong lime-sulphur or with Bordeaux paste.

An important professional paper on "The Toxicity to Fungi of Various Oils and Salts, Particularly Those Used in Wood Preservation," by C. J. Humphrey and Ruth M. Fleming, recently appeared as Bulletin No. 227 of the United States Department of Agriculture. The authors conclude that the common molds are more resistant to poisons than the true wood-destroying fungi, and even among the latter group the different species show a great difference in susceptibility. The results of tests on eighteen wood preservatives at the Forest-Products Laboratory, against two wood-destroying fungi, *Fomes annosus* Fr. and *F. pinicola* (Sw.) Fr., are given. Preservatives act in a considerably different manner on these two organisms, the former being, as a rule, far more resistant.

Another bulletin on "Citrus Canker," by H. E. Stevens, has been published by the Agricultural Experiment Station of the University of Florida. This bacterial disease, caused by *Pseudomonas Citri* Hasse, has proved to be the worst plant disease that has appeared in Florida and seriously threatens the citrus industry of the state, as well as of the entire South. It affects all parts of the tree above ground and attacks most of the varieties of *Citrus* grown in Florida. The bacteria are capable of considerable desiccation and retain their vitality for long periods. The complete destruction of all infected trees is the only known effective method of checking the spread of the disease, and this must be done very promptly if it is to be successful.

The February number of *Phytopathology,* which is both large and attractive, contains a long list of important articles and also abstracts of all the papers presented at the Seventh Annual Meeting of the American Phytopathological Society at Columbus, Ohio, December 28–31, 1915. Among the articles, the following may be mentioned: "Mordecai Cubitt Cooke," by H. T. Güssow, "The leaf blotch disease of horse-chestnut," by V. B. Stewart, "Some bark diseases of citrus trees in Florida," by J. G. Grossenbacher, "International phytopathology," by Otto Appel, "Identity of Peridermium montanum with Peridermium acicolum," by George Grant Hedgcock, and "The control of experimental conditions in phytopathological research," by Alden A. Potter.

An article on the discovery of the chestnut canker (*Endothia parasitica*) in Japan by Mr. Frank N. Meyer appeared in *Science,* February 4, 1916, contributed by C. L. Shear and Neil E. Stevens. About two years ago, Mr. Meyer discovered the chestnut canker in China. In a letter dated September 20, 1915, Mr. Meyer stated that the chestnut canker was quite common in Japan, at least around Nikko, Tokio, and Yokohama, both wild and cultivated trees being attacked but showing considerable power of resistance. Mr. Meyer sent some of his collections to Dr. Shear, who found them to be absolutely identical with material collected in the United States on the wild chestnut tree. On January 8, 1916, Dr. Shear received a specimen of chestnut canker from Dr. Yamada, of the Morioka Imperial College of Agriculture and Forestry, who attributed his discovery of the disease to a familiarity with the fungus gained on a recent visit to the United States. *Endothia radicalis* is also indigenous in Japan on various hosts and has been confused with the true chestnut canker, which it very much resembles.

AN ATTRACTIVE SPECIES OF MELANOLEUCA FROM OREGON

Melanoleuca olivaceiflava Murrill, sp. nov.

Pileus fleshy, convex to subexpanded, solitary, 2.5–3 cm. broad; surface smooth, dry, opaque, subtomentose, soft like a kid glove, not striate, very dark olivaceous, margin concolorous, entire, inflexed on drying: lamellae sinuate-adnexed, crowded, broad, ventricose, flavous: spores oblong-ellipsoid, smooth, hyaline, 12–16 × 4–5.5 μ: stipe short, thick, tapering downward, solid, fleshy, flavous, becoming brownish when bruised, 2 cm. long, 8 mm. thick.

Type collected on the ground in mixed woods at Corvallis, Oregon, November 6–11, 1911, *W. A. Murrill 948* (herb. N. Y. Bot. Gard.). This species is very conspicuous on account of its dark-olive pileus and bright-yellow lamellae and stipe. The spores are also quite remarkable, being very long and narrow. The plant is known only from the original collection.

W. A. MURRILL.

INSECTS AND MUSHROOMS

In Henri Fabre's "The Life of the Fly," a translation of which has been published by Dodd, Mead, and Company, there is a chapter devoted to insects and mushrooms, in which reference is first made to the widespread belief that mushrooms eaten by insect larvae are safe for human beings. The author then proceeds to describe in an interesting way what he observed in the neighborhood of Sérignan.

Of the chewing insects, he mentions four beetles and a moth-caterpillar. One of the beetles specializes on *Pholiota aegerita,* one attacks *Polyporus hispidus,* and the other two are partial to truffles. The caterpillar, about one fifth of an inch long, is the habitual boarder of all kinds of fleshy agarics and boleti. The chewers, to which group may be added the snails, all dig clean passages and break their food into minute particles. The flies, on the other hand, when in the maggot stage liquefy the flesh of the mushroom, dissolving it by means of a special pepsin as do the bluebottle maggots of meat.

The caterpillar and the maggots, as observed by Fabre, greedily devoured *Boletus Satanas,* but refused all species of *Amanita,* whether edible or poisonous; while the mild *Lactaria deliciosa* and the acrid *Lactaria torminosa,* the poisonous *Pleurotus phosphoreus* and the edible *Pleurotus Eryngii,* proved equally attractive to these insects. The author concludes that the selection of mushrooms by insects is no criterion for the human mycophagist.

Then follows a *very inaccurate and dangerous statement,* to the effect that no one was ever poisoned at Sérignan by eating mushrooms because it was the custom to "blanch" them, or bring them to the boiling point in water with a little salt added, and then to rinse them a few times in cold water. The "poisonous" species mentioned as treated in this way are *Armillaria mellea, Boletus Satanas, Lactaria zonaria, Amanita pantherina, Amanita muscaria,* and *Pleurotus phosphoreus;* some of which are entirely harmless, some are rendered harmless by boiling, and the rest contain as their active poisonous principle the alkaloid muscarin, which is soluble in hot water. If *Amanita phalloides* had accidentally come into the experiment, the conclusion would have been very different. Romell, of Sweden, doubted *Entoloma lividum* and tried boiling it for five minutes and throwing the water away;—he narrowly escaped death.

Attention is called to Dr. Clark's note on this subject in *Mycologia* for July, 1912, which closes with the following statement: "*Amanita phalloides* still preserves its toxic principle unchanged after being heated to boiling for some time; in the dried state its toxicity is not weakened after standing a year nor has it lost its poisonous properties after remaining dry for six years; the poison is still held in the tissues of the mushroom after boiling with water.

"Therefore it is very unwise to spread broadcast the erroneous idea that all poisonous mushrooms may be rendered harmless by boiling with water and then washing repeatedly in cold water."

W. A. MURRILL.

MARASMIUS ON SUGAR CANE

Fulton in Bulletin No. 100 of the Louisiana Experiment Station reported *Marasmius plicatus* on sugar cane. His description of "stipe whitish" differs so much from that of the original *M. plicatus* Wakker as to lead one to suspect another fungus. My own dried material of *Marasmius* on sugar cane from Louisiana and Texas answers to the description of *M. stenophyllus* or its synonym *M. semiustis.* As I recall the form in the field, the pileus occasionally presents a purplish color. This corresponds with material occurring on sugar cane in Cuba and common on certain varieties of banana. Dr. Murrill identified my material from sugar cane and banana as *M. stenophyllus.*

Unfortunately, no one in this part of the world has been able to compare material with the original *M. plicatus* described by Wakker and Went, from Java, but nevertheless all the available evidence seems to show clearly that the species of *Marasmius* parasitic on sugar cane in the Southern United States and occasionally parasitic on sugar cane and common on bananas in Cuba is *M. stenophyllus.*

The more common species of *Marasmius* on sugar cane is commonly known as *M. Sacchari.* This answers well to the original description by Wakker and Went, and, moreover, Went identified material in Trinidad as such (see Went, "Waarnemingen en opmerkingen omtrennt de Rietsuiker industrie in West Indie"). *M. Sacchari* appears to occur throughout the West Indies as a parasite of sugar cane and to its damage is assigned the main reason for giving up the Bourbon cane and the adoption of seedling and other varieties. *M. stenophyllus* is reported on bananas in many West Indian islands, but has not been reported before on sugar cane.

These two species are very similar, although *M. stenophyllus* occasionally has a purplish pileus, while *M. Sacchari* never does so far as I know. The only safe criterion for separating the species is the spore form and size, the spores of *M. stenophyllus* being ellipsoid, 7–9 × 5–6 μ, and the spores of *M. Sacchari* being irregularly elongate, often slightly curved, larger at one end than at the other, and 16–20 × 4–5 μ.

J. R. JOHNSTON.